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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,246	02/24/2004	Helmut Lucke	450100-03060.1	8911

7590 02/13/2007
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NEW YORK, NY 10151

EXAMINER

LERNER, MARTIN

ART UNIT	PAPER NUMBER
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2626

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	02/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/785,246

Applicant(s)

LUCKE ET AL.

Examiner

Martin Lerner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 5 and 7 to 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 to 5 and 7 to 12 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 13 to 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/804,354.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

EX PARTE QUAYLE

1. This application is in condition for allowance except for the following formal matters:
2. Claims 13, 14 and 15 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants are required to cancel the claims, or amend the claims to place the claims in proper dependent form.

New claims 13, 14, and 15 repeat the limitations of independent claims 1, 7, and 8, respectively, upon which they depend. Both the independent claims 1, 7, and 8, and the dependent claims 13, 14, and 15, contain identical limitations directed to "wherein the unknown word dictionary includes a general purpose branch and an attribute branch connected in sequence, a loop branch is connected to the general purpose branch, wherein unknown words are repeatedly processed through the general purpose branch a predetermined number of times after going through the loop branch." Evidently, Applicants amended independent claims 1, 7, and 8, but forgot to cancel dependent claims 13, 14, and 15, after deciding to incorporate the limitations into the independent claims. Applicants should cancel dependent claims 13, 14, and 15.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

ALLOWABLE SUBJECT MATTER

3. Claims 1 to 5 and 7 to 12 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or reasonably suggest the limitations of independent claims 1, 7, and 8, wherein the unknown word dictionary includes a general purpose branch, an attribute branch, and a loop branch, wherein unknown words are repeatedly processed through the general purpose branch a predetermined number of times after going through the loop branch.

Generally, it is known for speech recognition to provide an unknown word dictionary, so that out-of-vocabulary words are rejected instead of being erroneously recognized as one of the words in a standard dictionary database. However, Applicants' invention is directed to recognizing unknown words from word roots, prefixes, and suffixes, and classifying them by part of speech, where the suffixes or prefixes are attributes that provide an indication of the part of speech, *e.g.* -ing, -ed, -tion, or -ive. Applicants' Specification, Pages 23 to 24: Figure 4, discloses that an acoustic score is calculated until it becomes large enough by iteratively passing through the general purpose branch a predetermined number of times, passing through a loop branch, and passing through the attribute branch. The Specification, Pages 12 to 14, discloses an objective of reducing degradation of speech recognition accuracy when an erroneous recognition of an unknown word causes adjacent words to be erroneously

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recognized, too. The prior art of record does not disclose or reasonably suggest iteratively traversing a general purpose branch, a loop branch, and an attribute branch to improve recognition accuracy of words in an unknown word dictionary.

CONCLUSION

5. The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure.

Komori et al., Yamamoto et al., El Meliani et al., and Haeb-Umbach et al. disclose related art.

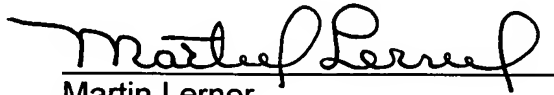
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (571) 272-7608. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ML
2/7/07


Martin Lerner
Examiner
Group Art Unit 2626